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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

COUNTRY USSR

SUBJECT Industrial Plants--Miscellaneous Info on Production and Equipment

50X1

PLACE ACQUIRED

DATE ACQUIRED

DATE OF INFORMATION

50X1

DATE DISTR. 2 Sept 52

NO. OF PAGES 5

50X1

NO. OF ENCLS. (LISTED BELOW)

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SUPPLEMENT TO REPORT NO.

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The structural organization of the system of administration of industry in the USSR has changed several times. Names of establishments and their integral parts, those managing certain branches of industry or dealing with certain special problems, have also changed. [redacted] one should have lists of People's Commissariats, Ministries (as they were changed), and the boards of the People's Commissariats. These lists [redacted] appeared in Soviet newspapers several times at least before World War II, in connection with their reorganizations. [redacted] each plant is included in a number of enterprises of only one industrial board, and is subordinated to this board. In some cases known to me, machine-building plants have manufactured simultaneously both civilian and military items. Hence, if the first assumption is correct, the conclusion can be drawn that the board responsible for civilian production may at the same time be responsible for military production. [redacted] several Machine-building plants which were included in a number of enterprises of different Ministries before World War II, manufactured tanks during the war. One plant in this category was the "UZTM" (Uralsky Heavy Machine-Building Plant imeni Ordzhonikidze), which before World War II was included in the system of plants of "MTM" (the Ministry of Tank Industry, where it remained at least until 1946. In 1946, however, it was persistently affirmed that "UZTM" would be returned to "MTM" in the nearest future, and in all probability, this has occurred. [redacted] there were no plans concerning the dissolution of the Ministry of Tank Industry.

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A. (a) In the 1930's the "Gorlovsky Machine-Building Plant of Mine Equipment" of "Glavgormash" manufactured the following kinds of equipment:

- (1) Chain cutting machines with electric drives and a steel rope pull, of the type "DTK-2" (Donetskaya-Tyazholaya-Kanatnaya - Donetsk-heavy-rope). The cutting machine "longwall" CIE of the firm Sullivan was a prototype of this machine. The cutting machine "DTK-2" differed very little in design from the cutting machine CIE.
- (2) Centrifugal mine multi-stage pumps of series of type-sizes with single-piece housing (of "Zulzer" type) and sectional.
- (3) Rotatory double-stage compressors of "Demag" type.
- (4) Mine ventilators (blowers) of "Rato" and "Sirocko" types.
- (5) Mine lifting buckets (cages).
- (6) Mine cars (wagons) with holding capacity equalized, [redacted] from 0.5 to 2.0 tons.
- (7) Experimental mine combines and loading machines for operating at face.

[redacted] mine electric locomotives could be manufactured at the machine-building plant in Voroshilovgrad.

(b) In 1932, [redacted] the Gorlovsky Machine-Building Plant [redacted] belonged to the system of "Glavgormash" (The Board of Mine Machine-Building) of "NKTP" (People's Commissariat of Heavy Industry). [redacted] since world war II that plant has gone under the control of the Ministry of Coal Industry of West Regions of the USSR.

6. [redacted] the 55-133 Bryansky Machine Building Plant [redacted]

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50X1 This plant is very large, with about 30,000 employees. It was built before
 50X1 the revolution and was later expanded. [redacted] several types of rail-
 7. road cars are among the things manufactured by this plant.

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(a) The degree of the use of alloyed steels differs considerably from one field of technology to another. Brands of steels themselves are also different. It seems to me that the investigation of plant standards of construction materials of leading machine-building plants of most metal-capacity fields of metal working industry of the USSR would be one of the best methods of approach to the solution of this problem. The range of the use of different kinds of steels at the given enterprise is indicated, as a rule, in those standards. Concrete instances of a recommended use of different marks of steels are indicated also as examples. Both the chemical composition and mechanical properties of these steels and recommended methods of their heat treatment (for different instances of their use) are given in these same standards.

"OST's" and "GOST's" of steels can help to a certain degree to a solution of this problem. They are less complete, however, than the real nomenclature of alloyed steels used by plants, and, besides that, they cannot give such exact directions to the degree of the actual use of these marks of steels in concrete instances as plant standards do.

50X1 [redacted] the following alloyed steels are included in the number of steels which are used the most extensively in the production of heavy machine-building plants: manganese silicide steels ("KG"-kind), and chrome manganese silicide steels ("KhKG"-kind). Then there are chrome-nickel steels. There are vast resources of manganese ores in the USSR, a fact which makes it possible to use steels with the aftercharge of manganese very extensively. Chrome nickel steels are used considerably less extensively in heavy machine-building.

50X1 (b) [redacted] only (manual) hand-operated arch electric welding and torch welding (the latter-considerably less extensive) were used in the heavy machine-building in the USSR before World War II (not taking into account forge welding). During the World War II, "TsNIITMASH" (The Central Scientific-Research Institute of Technology and Machine-Building) worked out a design of the so-called welding combine, built up its experimental specimen and performed its tests. To my knowledge the welding combine found it necessary to make automatic arch electric welding under a thick layer of fluxes. It has been said that the welding combine was of a very large productivity, that it was capable of welding steel plates and thick sheets and that it guaranteed the quality of seams with the safety factor equalized to one. It has also been said, that the welding combine was most successful and would be "introduced" into industry, i.e. it would be manufactured and used at plants.

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[redacted]

50X1 The nomenclature of hot-rolled shapes and solid cross sections is very narrow in the USSR. The nomenclature of products of cold rolling in the USSR is narrow to an even greater degree. In cases known to me, the shortage of profiles of hot-rolled products has been compensated chiefly at the expense of composing of necessary cross sections of steel sheets and strips cemented with electric welding. [redacted] the equipment of "TsMK" (the steel structure shop) of

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"NKMZ" (Novo-Kramatorsky Machine-Building Plant) allowed flanging and angular bending of a steel strip and of a sheet of a comparatively small sizes in a cold state.

50X1 The individual character of the main manufacture of "NKMZ" did not reserve the possibility for development of forging in stamps not taking into account military orders. Except the period of World War II, the free forging was dominant at "NKMZ".

8.

50X1 in the thirties cutting machines of the longwall type operated almost exclusively in the coal mines of the Donetz Basin. Cutting machines of the longwall type were then considered to be the most appropriate for the existing working conditions at the majority of mines in the Donetz Basin.

9.

50X1 Before World War II experimental machines of these types, manufactured by the Gorlovsky Machine-Building Plant, were in the test and "finishing" stages. the work on the 50X1 manufacture of these experimental machines has been done at the experimental plant of mine equipment, situated near the railroad station "Malakhovka" at a 50X1 distance of a few tens of kilometers from Moscow.

10.

50X1 before World War II the process of "bottom swage" (cutting) of coal and of "conveyance" to intermediate drifts was fully mechanized at slanting layers of coal mines of the Donetz Basin. Loading on conveyors, however, was performed by hand. Conveyance of coal to a stockyard (to a shaft of a mine) along principal minings of a mine (slopes, drifts, crosscuts) was mechanized to a considerable degree. however, horse pull was used even at principal drifts and crosscuts of many mines. Hoisting in vertical and sloping shafts was equipped with skips and cages. New mine hoists were made only with drives from electric motors.

11.

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(a) There was the so-called "Technical Department "2" or, as it was often called, "Spetz Otdel" (special department) at "NKMZ" in Kramatorsk.

(b) The Technical Department "2" was occupied with problems of military production at this plant. Among the duties of this department were the following: Preparation of all Documents of order for manufacture; delivery of orders to manufacture (shops); giving of consultations necessary to shops on the problems of manufacture of special production; relations with customers.

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50X1 Any instances of shutdowns of the plant "NKMZ" in Kramatorsk or its individual shops because of difficulties with materials are unknown to me. Steam-hydraulic presses of "KPTs" (Forge-Pressing Shop) of "KNMZ" in Elektrostal were put out of service several times because of the absence of steam (1943-1944), as a result of a lack of coal. At the same time, coal was consumed by the plant in relatively small quantities, just enough to keep the boilers going until permission for use of the inviolable stock was received from "MTM". This situation lasted several days each time, but only until coal was acquired. Then the inviolable stock was restored, and the normal operation of the steam-hydraulic presses was again begun. 50X1

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50X1 All kinds of foodstuffs for people, all kinds of fodder for livestock, extracted raw materials, semifinished products, finished articles of all fields of industry, all can be either in the process of turnover (including consumption) or in the process of storage (preservation). Storage as used here is not understood as that often taking place in the manufacturing process, but rather the storage at the bases of state material and provision reserves. 50X1 foodstuffs and forage which are exempted from current consumption by the Soviet authorities are stored at bases of provision (food) reserves. These foodstuffs are reserve funds (stocks) of the Government, accumulated firstly, in case of war, and secondly, for trade with other countries. 50X1 the same principles should be applied to the so-called material reserves.

14.

50X1 each large Soviet industrial enterprise has stored at the 50X1 plant its inviolable stock of all principal kinds of fuel which it uses, and of some basic materials which, if there should be an interruption of delivery in them, would cause a shutdown of the plant. Also, 50X1 there are in existence official norms on the nomenclature and quantities, on methods of storage and renovation, and on the rules of use and replacement. 50X1 at "NKMZ" in Elektrostal, the inviolable stock - "NZ" - of coal had to be equal in its volume to the two-week consumption. This level was not, however, always maintained. Many times during world war II, the plant had in reserve a coal supply for only two to three days.

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